

UTILITY PATENT APPLICATION TRANSMITTAL (Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
END920030022US1

Total Pages in this Submission
4

TO THE COMMISSIONER FOR PATENTS

Mail Stop Patent Application

P.O. Box 1450

Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

METHOD AND STRUCTURE FOR SLEF HEALING CRACKS IN UNDERFILL MATERIAL BETWEEN AN I/C CHIP AND A SUBSTRATE BONDED TOGETHER WITH SOLDER BALLS

and invented by:

George H. Thiel

ASSIGNEE NAME: International Business Machines Corporation
ASSIGNEE RESIDENCE: Armonk, NY

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 10 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☒ Cross References to Related Applications (if applicable)
 - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
 - e. ☒ Background of the Invention
 - f. ☒ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings (if filed)
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☐ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☒ Formal Number of Sheets 2
- b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
- a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under
Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby
incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☒ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
- a. ☐ Computer Readable Form (CRF)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

9. ☒ Assignment Papers *(cover sheet & document(s))*
10. ☐ 37 CFR 3.73(B) Statement *(when there is an assignee)*
11. ☐ English Translation Document *(if applicable)*
12. ☒ Information Disclosure Statement/PTO-1449 ☒ Copies of IDS Citations (non-US)
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)* (2)
15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail *(Specify Label No.):* EV 342658919US

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(Large Entity)

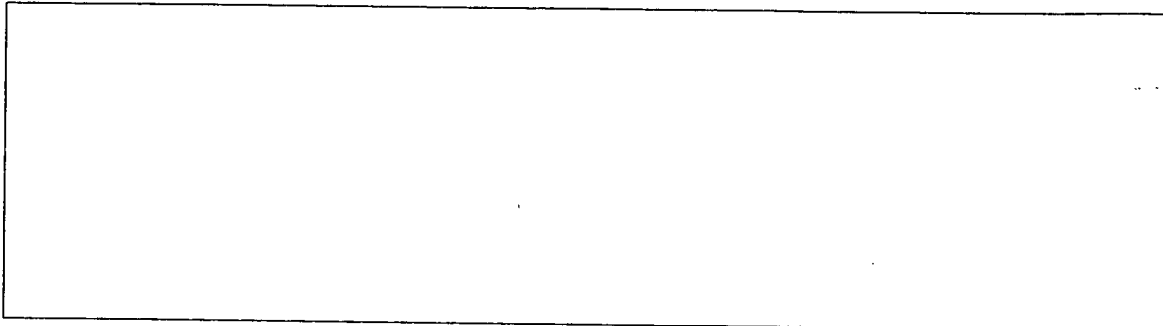
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Accompanying Application Parts (Continued)

17. ☐ Additional Enclosures *(please identify below):*



Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

18. ☐ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

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Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	16	- 20 =	0	x \$18.00	\$0.00
Indep. Claims	2	- 3 =	0	x \$86.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$770.00
OTHER FEE (specify purpose) _____					\$0.00
TOTAL FILING FEE					\$770.00

- ☐ A check in the amount of _____ to cover the filing fee is enclosed.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 09-0457 as described below.
- ☒ Charge the amount of \$770.00 as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated:

10/16/03

Signature

William H. Steinberg, Reg. No. 28,540
IBM Corporation / IP Law Dept. IQ0A, Bldg. 040-3
1701 North Street
Endicott, NY 13760
Telephone: (607) 429-3979
Fax No.: (607) 429-5282

cc: RECORDS

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)

Applicant(s): Thiel

DOCKET NO.
END920030022US1
(IEN-10-5752)

Serial No.
To be assigned

Filing Date
Filed Herewith

Examiner

Group Art Unit

Invention: **METHOD AND STRUCTURE FOR SELF HEALING CRACKS
IN UNDERFILL MATERIAL BETWEEN AN I/C CHIP AND A
SUBSTRATE BONDED TOGETHER WITH SOLDER BALLS**

I hereby certify that the following documents

New Utility Patent Application Transmittal

Application Data Sheet

Patent Application comprising 5 pages of specification, 4 pages of claims,
1 page of Abstract and 2 sheet of drawings

Declaration and Power of Attorney for Patent Application

Assignment and Recordation Cover Sheet

IDS Submission Statement with 1449 Form and copies of ~~all~~ citations (non-US)

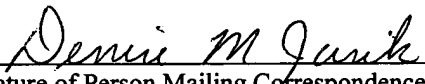
Two (2) Acknowledgement post cards

are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

10/16/03.

Denise M. Jurik

(Typed or Printed Name of Person Mailing Correspondence)


(Signature of Person Mailing Correspondence)

EV 342658919 US

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